

WHAT IS CLAIMED IS:

1. A wafer carrier comprising:

an enclosure portion formed substantially from polycarbonate plastic having at least a top, a bottom, a pair of opposing sides, a back, and an open front; and

a door to close the open front, wherein said door has an outer surface portion formed substantially from a plastic material selected from the group of plastic materials consisting of polyimide, polyether imide, polyamide imide, polyketone, polyetherketone, polyetheretherketone, polyetherketoneketone, polyether sulphone, and polytetrafluoroethylene, and wherein said plastic material has a Fire Propagation Index of not greater than  $9.0 \text{ (m/s)}^{1/2} \text{ (kW/m)}^{-2/3}$ ;

whereby the outer surface portion is relatively retardant to vertical propagation of fire.

2. The wafer carrier of claim 1, wherein said outer surface portion is formed from polyether imide plastic.

3. The wafer carrier of claim 1, wherein said outer surface portion is formed from polyetheretherketone plastic.

4. The wafer carrier of claim 1, wherein said outer surface portion comprises an exterior panel of said door.

5. The wafer carrier of claim 1, wherein said outer surface portion comprises a layer of fire retardant plastic over a layer of polycarbonate plastic.

6. The wafer carrier of claim 5, wherein said layer of fire retardant plastic is molded over said layer of polycarbonate plastic.

7. The wafer carrier of claim 1, wherein said outer surface portion comprises a shield panel affixed to said door with an adhesive.

8. The wafer carrier of claim 1, wherein said outer surface portion comprises a shield panel affixed to said door with a plurality of fasteners.

9. A carrier for articles comprising:

an enclosure having an outer surface and an article support in the enclosure, the enclosure having a first portion formed substantially from polycarbonate plastic, and a second portion formed from a fire retardant plastic material having a flame propagation index of not greater than

$9.0 \text{ (m/s}^{1/2}\text{)(kW/m)}^{-2/3}$ , wherein the second portion forms at least a portion of the outer surface of the enclosure, whereby the outer surface portion is relatively retardant to vertical propagation of flame.

10. The carrier of claim 9, wherein the fire retardant plastic material is selected from the group of plastic materials consisting of polyimide, polyether imide, polyamide imide, polyketone, polyetherketone, polyetheretherketone, polyetherketoneketone, polyether sulphone, and polytetrafluoroethylene.

11. The carrier of claim 10, wherein the fire retardant plastic material is polyether imide.

12. The carrier of claim 10, wherein the fire retardant plastic material is polyethylethylketone.

13. The carrier of claim 9, wherein the enclosure includes an open front and a door selectively engagable with the enclosure to seal the open front, and wherein the door has an outer surface made from a fire retardant plastic material having a flame propagation index of not greater than  $9.0 \text{ (m/s}^{1/2}\text{)(kW/m)}^{-2/3}$ .

14. The carrier of claim 9, wherein the first portion comprises an inner layer of polycarbonate plastic and the second portion comprises an outer layer of the fire retardant plastic material over the inner layer.

15. The carrier of claim 14, wherein the outer layer of retardant plastic material is molded over the inner layer of polycarbonate plastic.

16. The carrier of claim 9, wherein the second portion comprises a shield panel affixed to the first portion with an adhesive.

17. The carrier of claim 9, wherein the second portion comprises a shield panel to the first portion with a plurality of fasteners.

18. The carrier of claim 9, wherein the article support comprises a plurality of wafer holding shelves.

19. The carrier of claim 9, further comprising a kinematic coupling on the exterior of the carrier.

20. The carrier of claim 9, wherein the carrier is a SMIF pod.
21. The carrier of claim 9, wherein the carrier is a shipping container.
22. The carrier of claim 9, wherein the carrier is a WIP box.
23. The carrier of claim 9, wherein the carrier further comprises an overhanging lip portion made from fire retardant plastic material.
24. A method of making a flame retardant front opening unified pod wafer carrier comprising:
- forming, from polycarbonate plastic, an enclosure portion having at least a top, a bottom, a pair of opposing sides, a back, and an open front; and
- forming a door for closing the open front, said door having an outer surface portion comprising plastic material with a Fire Propagation Index of not more than  $9.0 \text{ (m/s}^{1/2}\text{)(kW/m)}^{-2/3}$ .

25. The method of claim 24, wherein said door has an outer panel, and further comprising the step of molding said outer surface portion over said outer panel.

26. The method of claim 24, wherein said door has an outer panel, and further comprising the steps of molding a fire retardant layer member and affixing said layer member to said outer panel.

27. A method of improving the fire retardancy of a carrier for articles, said carrier comprising an enclosure portion having an outer surface, said enclosure including a first portion formed substantially from polycarbonate plastic, the method comprising overlaying at least a portion of the outer surface of said first portion with a layer of plastic material having a flame propagation index of not more than  $9.0 \text{ (m/s}^{1/2}\text{)(kW/m)}^{-2/3}$  so that said layer of plastic material forms at least a portion of the outer surface of the enclosure.

28. The method of claim 27, wherein said plastic material is selected from the group consisting of polyimide, polyether imide, polyamide imide, polyketone, polyetherketone, polyetheretherketone, polyetherketoneketone, polyether sulphone, and polytetrafluoroethylene.

29. The method of claim 27, further comprising the steps of molding said plastic material into a separate shield panel and affixing said shield panel to said door.

30. A wafer carrier comprising:

an enclosure portion formed substantially from polycarbonate plastic, said enclosure portion having an article support therein, said enclosure portion having an exterior surface; and means on said exterior surface for retarding the spread of fire on said exterior surface.

31. The carrier of claim 30, wherein said means for retarding the spread of fire comprises a layer of fire retardant plastic material on said polycarbonate plastic, wherein said layer of fire retardant plastic material has a Fire Propagation Index of  $9.0 \text{ (m/s}^{1/2}\text{)(kW/m)}^{-2/3}$  or less.

32. The carrier of claim 31, wherein said fire retardant plastic material is selected from the group consisting of polyimide, polyether imide, polyamide imide, polyketone, polyetherketone, polyetheretherketone, polyetherketoneketone, polyether sulphone, and polytetrafluoroethylene.

33. The carrier of claim 32, wherein said fire retardant plastic material is polyether imide.

34. The carrier of claim 30, wherein the enclosure includes an open front and a door selectively engagable with the enclosure to seal the open front, and wherein the door has an outer surface made from a fire retardant plastic material having a flame propagation index of not greater than  $9.0 \text{ (m/s}^{1/2}\text{)(kW/m)}^{-2/3}$ .

35. The carrier of claim 34, wherein said door is formed from polycarbonate plastic, and wherein said outer surface comprises a separate layer of fire retardant plastic material, said fire retardant plastic material having a Fire Propagation Index of  $9.0 \text{ (m/s}^{1/2}\text{)(kW/m)}^{-2/3}$  or less.

36. The carrier of claim 31, wherein said fire retardant plastic material is selected from the group consisting of polyimide, polyether imide, polyamide imide, polyketone, polyetherketone, polyetheretherketone, polyetherketoneketone, polyether sulphone, and polytetrafluoroethylene.

37. The carrier of claim 31, wherein said separate layer of fire retardant plastic material is molded over said exterior surface.

38. The wafer container of claim 31, wherein said separate layer of fire retardant plastic material is molded as a separate shield panel and affixed to said exterior surface with an adhesive or with a plurality of fasteners.